

**WEST**

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L11: Entry 8 of 10

File: DWPI

Dec 9, 1983

DERWENT-ACC-NO: 1984-020682  
DERWENT-WEEK: 198404  
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TITLE: Low reflectivity glass - with thin film of poly:fluoroalkyl gp.-contg. silane  
cpd. and metal fluorosilicate salt

PATENT-ASSIGNEE:

ASSIGNEE

CODE

ASAHI GLASS CO LTD

ASAG

PRIORITY-DATA: 1982JP-0094759 (June 4, 1982)

PATENT-FAMILY:

PUB-NO

PUB-DATE

LANGUAGE

PAGES

MAIN-IPC

JP 58211701 A

December 9, 1983

006

APPLICATION-DATA:

PUB-NO

APPL-DATE

APPL-NO

DESCRIPTOR

JP58211701A

June 4, 1982

1982JP-0094759

INT-CL (IPC): G02B 1/10

ABSTRACTED-PUB-NO: JP58211701A

BASIC-ABSTRACT:

The glass is obtd. by forming a thin film of less than 1 micron consisting of a mixt. of polyfluoroalkyl gp.-contg. silane cpd. of formula (RfQ)aSiXbYl4-a-b (I) or its partial hydrolytic condensate, and metallic salt of fluorosilicate of formula (M) c(SiFd(Y2)e)f (II), on the surface of glass. (Rf is 1-20C polyfluoroalkyl which may contain 1 or more ether bonds, Q is divalent organic gp.; Y1 is halogen, alkoxy or RCOO- (R is H or lower alkyl), M is Li, Be, B, Na, Mg or Al; Y2 is H Cl or R'COO- (R' is H or lower alkyl), a is 1-3, b is 0-2, c is 1 or 2 d is 1-4, e is 0-2, and f is 1 when c is 1 and 1 or 3 when c is 2).

Reflectivity of the glass in visible region is 0.5-0.8% if 4.2% for common soda lime glass and the hardness of the thin film formed is 6H (pencil hardness) of 4B of the film made of Rf gp.-contg. silane cpd. alone. Glass is useful for e.g. window glass of building, etc.

CHOSEN-DRAWING: Dwg.0/0

TITLE-TERMS: LOW REFLECT GLASS THIN FILM POLY FLUOROALKYL GROUP CONTAIN SILANE  
COMPOUND METAL FLUOROSILICATE SALT

DERWENT-CLASS: L01 P81

CPI-CODES: L01-G04; L01-L01;

SECONDARY-ACC-NO:

CPI Secondary Accession Numbers: C1984-008823

Non-CPI Secondary Accession Numbers: N1984-015402

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L11: Entry 9 of 10

File: DWPI

Oct 3, 1983

DERWENT-ACC-NO: 1983-811935

DERWENT-WEEK: 198345

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TITLE: Low reflectivity glass mfr. - by forming thin film of poly:fluoroalkyl  
Gp.-contg. silane cpd., or its partially hydrolysed condensate, on glass surface

PATENT-ASSIGNEE:

ASSIGNEE

ASAHI GLASS CO LTD

CODE

ASAG

PRIORITY-DATA: 1982JP-0049966 (March 30, 1982)

PATENT-FAMILY:

PUB-NO

PUB-DATE

LANGUAGE

PAGES

MAIN-IPC

JP 58167448 A

October 3, 1983

005

INT-CL (IPC): C03C 17/30; G02B 1/10

ABSTRACTED-PUB-NO: JP58167448A

BASIC-ABSTRACT:

Low reflectivity glass is mfd. by forming a thin film of less than 1 micron  
thickness of polyfluoroalkyl gp.-contg. silane cpd. of formula (I), or partially  
hydrolysed condensate, on the glass surface.

(RfQ)aSiXbY4-a-b (I)

(where Rf is 1-20C polyfluoroalkyl gp. opt. contg. ether bond(s); Q is a divalent  
organic gp.; X is lower alkyl; Y is halogen, alkoxy or RCOO(-) (R is H or lower  
alkyl); a is 1-3; and b is 0-2).

The Rf gp.-contg. silane cpd. is firmly adhered to the surface of the glass,  
lowering its reflectivity. An example of the cpd. is

CF3CF2XF2O-C(CF3)FCF2O)m C(CF3)FCONH(CH2)3Si(OCH3)3

Low reflectivity glass of improved durability and weather resistance is obtd., and  
is useful for windows of buildings or vehicles, glass doors, optical instruments,  
etc.

CHOSEN-DRAWING: Dwg.0/0

TITLE-TERMS: LOW REFLECT GLASS MANUFACTURE FORMING THIN FILM POLY FLUOROALKYL GROUP  
CONTAIN SILANE COMPOUND HYDROLYSIS CONDENSATE GLASS SURFACE

DERWENT-CLASS: A89 E11 L01 P81

CPI-CODES: A05-H; A10-E22; A12-B05; E05-E02; L01-G04; L01-L01; L01-L02; L01-L05;

CHEMICAL-CODES:

Chemical Indexing M3 \*01\*

## Fragmentation Code

B414 B711 B712 B713 B720 B741 B742 B743 B744 B751  
B752 B793 B799 B831 H581 H582 H583 H584 H601 H607  
H608 H609 H681 H682 H683 H684 H685 H689 J011 J371  
M210 M211 M212 M213 M214 M215 M216 M220 M221 M222  
M223 M224 M225 M226 M231 M232 M233 M240 M262 M272  
M280 M281 M282 M283 M311 M312 M313 M314 M315 M316  
M321 M322 M323 M331 M332 M333 M334 M340 M343 M344  
M361 M362 M391 M392 M393 M411 M510 M520 M530 M540  
M620 M781 M903 Q452 R043

## POLYMER-MULTIPUNCH-CODES-AND-KEY-SERIALS:

Key Serials: 0013 0202 0207 0210 0231 1279 1630 1634 2001 2002 2014 3317 2592 2593 2605 2654  
3252 2692 2695 3267 2827 3310 3311 3312 2851

Multipunch Codes: 013 028 039 04- 05- 062 064 147 157 229 231 24- 240 274 31- 336 37- 431 477 516  
521 54& 541 543 57& 575 58& 59& 596 597 600 613 615 649 672 688 720

## SECONDARY-ACC-NO:

CPI Secondary Accession Numbers: C1983-109180

Non-CPI Secondary Accession Numbers: N1983-200484

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L11: Entry 7 of 10

File: DWPI

Dec 12, 1983

DERWENT-ACC-NO: 1984-021481  
DERWENT-WEEK: 198404  
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TITLE: Low reflectivity glass for windows etc. - has thin coating film of  
fluoro:silicate cpd.

PATENT-ASSIGNEE:

ASSIGNEE

CODE

ASAHI GLASS CO LTD

ASAG

PRIORITY-DATA: 1982JP-0092208 (June 1, 1982)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
JP 58213653 A	December 12, 1983		004	

APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-NO	DESCRIPTOR
JP58213653A	June 1, 1982	1982JP-0092208	

INT-CL (IPC): C03C 17/30; C07F 7/02

ABSTRACTED-PUB-NO: JP58213653A  
BASIC-ABSTRACT:

The glass is obt'd. by forming a thin film of less than 1 micron consisting of  
fluorosilicate cpd. of Rf gp-contg. amine of formula (I) on the surface of glass.

((RfQ)aN(+)XbY4-a-b)c.Z(+)2-c.(SiFdYe)2(-) (I)

Rf is 1-20C polyfluoroalkyl gp. opt. contg. one or more ether bond, Q is divalent  
organic; X, Y and Z are each H or monovalent organic gp.; a is integer of 1-3, b is  
0 or integer of 1-3, c is integer of 1 or 2, d is integer of 4-6, and e is 0 or  
integer of 1-2.

The reflectivity of glass in visible ray region is 0.5-0.7% in contrast with 4.2% of  
soda lime glass. The thin film has 3H-4H pencil hardness in contrast with 4B of the  
film made of Rf group-contg. silane cpd. The glass is useful for e.g. window glass  
of building, automobile, etc.

CHOSEN-DRAWING: Dwg.0/0

TITLE-TERMS: LOW REFLECT GLASS WINDOW THIN COATING FILM FLUORO SILICATE COMPOUND

DERWENT-CLASS: A26 E11 L01

CPI-CODES: A10-E08; A12-B05; A12-W12D; E05-E; E10-A22; E10-B04E; E31-P; L01-G04;  
L01-L01; L01-L02;

CHEMICAL-CODES:

## Chemical Indexing M3 \*01\*

## Fragmentation Code

H1 H100 H102 H103 H181 H6 H601 H607 H608 H609  
H681 H682 H683 H684 H685 H689 L722 M210 M220 M225  
M226 M231 M232 M233 M273 M280 M281 M282 M283 M311  
M312 M313 M314 M315 M316 M321 M322 M323 M331 M332  
M333 M334 M342 M343 M344 M362 M391 M392 M393 M416  
M417 M620 M640 M771 M782 M903 Q452

## Chemical Indexing M3 \*02\*

## Fragmentation Code

B314 B414 B720 B741 B742 B752 B760 B831 C009 C100  
C101 C803 C804 C805 C806 C807 M210 M220 M225 M226  
M231 M232 M233 M250 M280 M281 M282 M320 M411 M417  
M510 M520 M530 M540 M620 M630 M771 M782 M903 Q452

## POLYMER-MULTIPUNCH-CODES-AND-KEY-SERIALS:

Key Serials: 0013 0202 3002 0210 0231 1279 1630 1634 2002 2014 2592 2622 2654 2695 3267 2827  
3300

Multipunch Codes: 014 028 039 04- 05- 062 064 147 157 229 231 240 31- 334 336 37- 477 50& 516  
521 551 560 561 57& 575 596 613 615 672 688 720

## SECONDARY-ACC-NO:

CPI Secondary Accession Numbers: C1984-009171